

ABSTRACT OF THE DISCLOSURE

A Raman spectroscopy system includes a laser source for providing a laser beam, and an optical probe assembly including a photonic crystal fiber light guide for receiving the laser beam from the laser source and for directing the laser beam toward a specimen of selected material, a lens for receiving the laser beam in the light guide and directing the beam onto the specimen and for receiving reflected light from the specimen and directing the reflected light back through the fiber light guide, and a dichroic beam splitter for directing a portion of the reflected beam out of the optical probe assembly. The system further includes an optical spectrum analyzer for receiving the portion of the reflected beam and for exhibiting a Raman signature of the specimen.